

G1 CH2,CH,A,C,N,O,S,P,Si

Structure attributes must be viewed using STN Express query preparation.

```
=> s l1
SAMPLE SEARCH INITIATED 10:53:33 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -      221 TO ITERATE

100.0% PROCESSED      221 ITERATIONS      1 ANSWERS
SEARCH TIME: 00.00.01
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FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:   3529 TO  5311
PROJECTED ANSWERS:      1 TO    80
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L2 1 SEA SSS SAM L1

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=> s l1 sss full
FULL SEARCH INITIATED 10:53:39 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      4381 TO ITERATE
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100.0% PROCESSED      4381 ITERATIONS      26 ANSWERS
SEARCH TIME: 00.00.01
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L3 26 SEA SSS FUL L1

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=> file caplus
COST IN U.S. DOLLARS      SINCE FILE      TOTAL
                        ENTRY      SESSION
FULL ESTIMATED COST      185.88      186.10
```

FILE 'CAPLUS' ENTERED AT 10:53:44 ON 17 JUN 2009
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FILE COVERS 1907 - 17 Jun 2009 VOL 150 ISS 25
FILE LAST UPDATED: 15 Jun 2009 (20090615/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Apr 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Apr 2009

CPlus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

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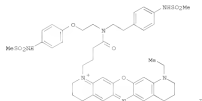
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3

L4 7 L3

=> d ibib abs hitstr tot

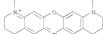
14 ANNEX 1 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2007:557643 CAPLUS
 DOCUMENT NUMBER: 147202899
 TITLE: Fluorescently Labeled Analogues of Dofetilide as High-Affinity Fluorescence Polarization Ligands for the Human Ether-a-g-go-Related Gene (HERG) Channel
 AUTHOR(S): V.J. Dawson, Matty de Groot, Marcel J.J. Price, David Nettleton, David O.J. Walker, Sara K.J. Trueman, Matthew D.J. Williams, Christine Boyd, James G. Explanatory Medical Sciences and ADME Technology Group, Pfizer Global Research and Development,
 CITATION: CT, 06349, USA
 SOURCE: Journal of Medicinal Chemistry (2007), 50(13), 2857-2943
 CODEN: JMCMAJ, ISSN: 0022-2625
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CHEMST 147202899
 CI



AB Novel fluorescent derivs. of dofetilide (1) have been synthesized. Analog that feature a fluorescent probe attached through an aliphatic spacer to the central tertiary nitrogen of 1 have high affinity for the HERG channel, and affinity is dependent on both linker length and pendant dye. These variables have been optimized to generate Cy3b derivative (1), which has HERG channel affinity equivalent to that of dofetilide. When bound to cell membranes expressing the HERG channel, 1 shows a robust increase in fluorescence polarization (FP) signal. In a FP binding assay using 1 as tracer ligand, Ki values for several known HERG channel blockers were measured and excellent agreement with the literature Ki values was observed.

14 ANNEX 1 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

PAGE 2-A



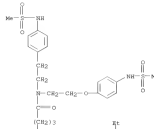
CI 2
 CRI 76-25-1
 CRI 12 17 02



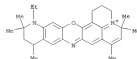
REFERENCE COPY: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RS
 FORMAT

14 ANNEX 1 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)
 over an affinity range of 2 nM to 3 µM. 3 blocks HERG channel current in electrophysial patch clamp expts., and computational docking expts. predict that the dofetilide core of 1 blocks HERG channel in a conformation similar to that previously predicted for 1. These analogs enable high-throughput HERG channel binding assays that are rapid, economical, and predictive of test compounds' potential for prolonged QT liabilities.
 IT 944919-96-4P
 RI: RSC (Pharmacological activity); SPH (Synthetic preparation); BGL (Biological study); PREP (Preparation)
 (Fluorescently labeled analogs of dofetilide as high-affinity fluorescence polarization ligands for human ether-a-g-go-related gene (HERG) channel)
 RI 944919-96-4 CAPLUS
 CI 28-Dipyrrolo[2,6-b',3'-d']phenoxazine, 11-ethyl-2,5,9,10,13-benzohydro-3,14-[12-14-[(methyldimethylamino)phenyl]ethyl]-12-14-[(methyldimethylamino)phenyl]ethyl-2,7,2,7-tetrafluorooctate (1:1) (CA INDEX NAME)
 CI 1
 CRI 944919-95-3
 CRI C42 R41 R6 07 52

PAGE 1-A

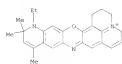


14 ANNEX 2 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2005:454377 CAPLUS
 DOCUMENT NUMBER: 143468879
 TITLE: Lasing properties of novel near-infrared laser dyes
 AUTHOR(S): Wenzel, Mark R.; Case, Antony D.J.; Fuller, David J.; Griffiths, John; Nana, John
 CORPORATE SOURCE: Snacor, Processing and Integration Cent., QinetiQ, Farnborough, GU14 0LX, UK
 SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (2005), 5707/Solid State Lasers XVI Technology and Devices, 227-236
 CODEN: PROEED, ISSN: 0277-7865
 SPIE-The International Society for Optical Engineering
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB A number of novel near IR oxazine laser dyes have been designed, synthesized and purified. The photophys. and lasing properties of these near IR laser dyes are reported in this paper. The dyes have been found to exhibit moderately high fluorescence quantum efficiencies. Laser testing has been undertaken on the novel oxazine dyes and the results have been compared with those obtained with com. available near IR laser dyes.
 IT 964058-78-0P, CI 11
 RI: PREP (Properties); PUR (Purification or recovery); SPH (Synthetic preparation); PREP (Preparation)
 (OX 1); design, synthesis, and purification of novel near IR oxazine laser dyes with its photophys. and lasing properties)
 RI 964058-78-0 CAPLUS
 CI 18,58-Pyrrolo[2,3-b]quinoxaline-1,9-bisphenoxazin-4-im-16-ethyl-2,5,13,14-tetrahydro-11,13,13-dimethyl-1- (PCI) (CA INDEX NAME)



IT 964058-79-7P, CI 12
 RI: PREP (Properties); PUR (Purification or recovery); SPH (Synthetic preparation); PREP (Preparation)
 (OX 1); design, synthesis, and purification of novel near IR oxazine laser dyes with its photophys. and lasing properties)
 RI 964058-79-7 CAPLUS
 CI 18,58-Pyrrolo[2,3-b]quinoxaline-1,9-bisphenoxazin-4-im-16-ethyl-2,5,13,14-tetrahydro-11,13,13-dimethyl-1- (PCI) (CA INDEX NAME)

14 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



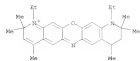
IT 864058-86-2P, OK 13

SL: PEP (Properties); PGR (Purification or recovery); SPH (Synthetic preparation); PREP (Preparation)

laser
dyes with its photophysics, and lasing properties)

RE 864058-86-2 CAPLUS

CH 28-Dipyrido[1,2-b:3',5'-d]phenoxazin-11,11'-diethyl-8,9,10-tetrahydro-2,2,4,8,9,10,10-hexamethyl- (CA INDEX NAME)



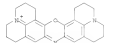
IT 145375-95-2P, OK 14

SL: PEP (Properties); PGR (Purification or recovery); SPH (Synthetic preparation); PREP (Preparation)

laser
dyes with its photophysics, and lasing properties)

RE 145375-95-2 CAPLUS

CH 16,16,18,18-tetrakis[2,3-bis(4-methyl-5-oxo-1,2,3,4-tetrahydro-1H-imidazol-2-yl)-4-methyl-5-oxo-1,2,3,4-tetrahydro-1H-imidazol-2-yl]-2,2,4,8,9,10,10-hexamethyl- (CA INDEX NAME)



IT 864058-81-3P, OK 15

SL: PEP (Properties); PGR (Purification or recovery); SPH (Synthetic preparation); PREP (Preparation)

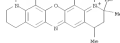
14 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

preparation); PREP (Preparation)

laser
dyes with its photophysics, and lasing properties)

RE 864058-81-1 CAPLUS

CH 16,16,18,18-tetrakis[2,3-bis(4-methyl-5-oxo-1,2,3,4-tetrahydro-1H-imidazol-2-yl)-4-methyl-5-oxo-1,2,3,4-tetrahydro-1H-imidazol-2-yl]-2,2,4,8,9,10,10-hexamethyl- (CA INDEX NAME)



REFERENCE CONTINUED
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26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS

FORMAT RECORD. ALL CITATIONS AVAILABLE IN THE SE

14 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2021389474 CAPLUS

DOCUMENT NUMBER: 145375152

TITLE: In vivo detection of amyloid-β deposits by near-infrared imaging using an oxazine-derivative probe

AUTHOR(S): Bartschewsky, Martin; Ems, Albert; Frey, Peter; Jaton, Anne-Lise; Kinay, Willy; Kneuer, Rainer; Neumann, Ulf; Rüdiger, Markus; Schaefer, Matthias; Stoeckli, Markus; Wiesend, Karl; Winkler, Grenlich, Hans-Joachim

CORPORATE SOURCE: Danvers Technologies, Novartis Institutes for Biomedical Research, Basel, CH-4002, Switzerland

SCIENCE: Nature Biotechnology (2005), 23(5), 577-583

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14 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

ACCESSION NUMBER: 2021389474 CAPLUS

DOCUMENT NUMBER: 145375152

TITLE: In vivo detection of amyloid-β deposits by near-infrared imaging using an oxazine-derivative probe

AUTHOR(S): Bartschewsky, Martin; Ems, Albert; Frey, Peter; Jaton, Anne-Lise; Kinay, Willy; Kneuer, Rainer; Neumann, Ulf; Rüdiger, Markus; Schaefer, Matthias; Stoeckli, Markus; Wiesend, Karl; Winkler, Grenlich, Hans-Joachim

CORPORATE SOURCE: Danvers Technologies, Novartis Institutes for Biomedical Research, Basel, CH-4002, Switzerland

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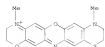
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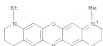
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L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)
 CNF C20 R22 NT 02



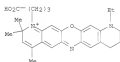
CN 2
 CNI 14874-70-5
 CNF 1 74
 OCT CCS



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR
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L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 15129428
 DOCUMENT NUMBER: 15129428
 TITLE: Photophysical Dynamics of Single Molecules Studied by Spectrally-Resolved Fluorescence Lifetime Imaging Microscopy (SRFLIM)
 AUTHOR(S): Tansfeld, Philipp; Reuter, Burk-Peter; Sauer, Markus
 CORPORATE SOURCE: Physikalisch-Chemisches Institut, Universität Heidelberg, Heidelberg, 69120, Germany
 SOURCE: Journal of Physical Chemistry A, 2001, 105(74), 7995-8003
 PUBLISHER: CORDIS JPCAR, 1581, 1009-5439
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB A new scanning technique for simultaneous recording of intensity, fluorescence lifetime, and spectral information with single-molecule sensitivity is presented. The photophys. parameters were studied and compared of single oxazine (3242), rhodamine (377), and cyanine (375) dyes. Adsorbed on glass surfaces under air-equilibrated conditions. SRFLIM is ideally suited to reveal subpopulations in inhomogeneous samples and states. To obtain a more detailed insight into the underlying fluorescence dynamics of single mole., the fluorescence characteristics of the 3 different chromophores were studied positioning isolated mole. in the laser focus. Two detectors with 2 PC plug-in cards for time-correlated single-photon counting (TCSPC) were used to monitor fluorescence intensity, lifetime, and spectral information simultaneously with single-mol. sensitivity and microsecond to millisecond time resolution. Discrete jumps in fluorescence intensity from single mole. which lacked spectral diffusion and changes in radiative lifetime were observed with correlation times (triplet lifetimes) spanning several orders of magnitude (from 2 ns for the rhodamine derivative up to several seconds for the oxazine dye) and amplitude. For the cyanine derivative Cy7, fast spectral fluctuations to red-shifted dim-states which appear partly as off-states with a lifetime in the millisecond range were determined. These dim-states exhibit the same radiative decay rate of approx. 2 ns as the normal on-state. The results imply that a direct correlation between the radiative decay time and spectral fluctuations is not necessarily given in each of the 3 chromophores. Both parameters seem to be independent characteristic of each individual mole. About 5-18 of all mole. independent of the dye structure, resp., exhibited a constant emission spectrum but strong fluctuations in fluorescence lifetime directly correlated to the intensity. A combined anal. of emission spectrum, intensity and relative decay rate is a valuable approach for classification and quantification of the underlying photophys. dynamics.
 IT 151213-03-5, 25-Dipyrro[7,2-bis], 3'-phenoxymethyl, 1-(3-methoxypropyl)-11-ethyl-9,9,10,11-tetrahydro-2,4,4-trimethyl-RLX MOA (Modifier or additive use); REP (Physical, engineering or chemical process); FRP (Properties); PRO (Process); USES (Uses)
 (Fluorescence lifetime imaging microscopy of single mole. of)

L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)
 RI 151213-03-5
 CI 25-Dipyrro[3,2-bis], 3'-phenoxymethyl, 1-(3-methoxypropyl)-11-ethyl-9,9,10,11-tetrahydro-2,4,4-trimethyl- (CA INDEX NAME)



REFERENCE COUNT: 63 THERE ARE 63 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
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L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 150128054
 DOCUMENT NUMBER: 150128054
 TITLE: Preparation and characterization of bridged naphthoxanilines
 AUTHOR(S): Kallit, Andreas; Hartmann, Rolf
 CORPORATE SOURCE: Fachbereich Chemie, Fachhochschule Merseburg, Merseburg, D-06127, Germany
 SOURCE: European Journal of Organic Chemistry, 1999, (4), 923-930
 PUBLISHER: CORDIS EJOCTF, 1581, 1434-193X
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 150128054
 AB Various bridged naphthoxanilines perchlorates were prepared by condensation of bridged 4-(aryloxy)-3-hydroxyanilines and bridged or unbridged 4-(aryloxy)-3-naphthoxyanilines with bridged 1-naphthylamines and 3-aminophenols, resp. In the presence of HCl. The spectral properties of the products were compared with those of bridged phenoxaniline salt as well as with data for some unbridged analogs.
 IT 223248-10-8
 RI: RAC (Biological activity or effector, except address); BSW (Biological study, unclassified); SPH (Synthetic preparation); BGL (Biological study); FRP (Preparation)
 (Preparation and UV absorption and fluorescence of bridged naphthoxanilines salts)
 RI 223248-10-8 CAPLUS
 CI 15,16,17,18-Diguanilino[1,9-bis], 8'-phenoxymethyl-6-ium, 2,3,4,7,12,13,16,17-octahydro-, perchlorate (PCl) (CA INDEX NAME)

CN 1
 CNI 145875-95-2
 CNF C24 R26 N3 0



CN 2
 CNI 14797-73-0
 CNF C1 04

14 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

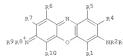


REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

14 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1997-67323 CAPLUS
 DOCUMENT NUMBER: 126176137
 ORIGINAL REFERENCE NO.: 126147139, 147224
 TITLE: Oxazine dyes, their preparation and their use as fluorescent labels in biological assay
 INVENTOR(S): Herrmann, Rupert; Joesel, Hans-Peter; Drenthage, Karl-Wilhelm; Maza, Nikolaus-Joseph
 PATENT ASSIGNOR(S): Hoechstwerke Mannheim GmbH, Germany
 SOURCE: Eur. Pat. Appl., 12 pp.
 CODEN: EPOLAM
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 747447	A2	19961231	EP 1996-109101	19960206
EP 747447	A3	19970610		
EP 747447	B1	20010816		
DE 19521275	A1	19961231	DE 1995-19512131	19950610
DE 1163945	T3	20011218	DE 1996-109101	19960206
JP 09022343	A	19970107	JP 1996-147691	19960101
US 2002024423	A1	20021104	US 2003-407768	20030403
PRIORITY APPL. INFO.:			DE 1995-19512131	A 19950610
			US 1996-662713	B2 19960206
			US 1998-141950	A3 19990201

OTHER SOURCE(S): NUSPAT 126176137
 CI



AB The oxazine deriva. (1) R1, R4, R5, R6, R7, R10 = H, alkyl, hydroxy, halogen, carbony, sulfo, amino; R2 = H, organic group; R2R3, or R3R4 may form heterocyclic rings with H; R8, R9 = H, organic group; R7R8, R8R9, or R3R10 may form heterocyclic rings with H; R1 of R1, R2, R3, R9 is not in ring form and is capable of coupling and R1 of R2, R3, R8, R9 is in optionally substituted ring form; also obtained by cyclodehydration of 3-aminophenols with 2-nitroso-5-aminophenols. 1 and their conjugates with nucleobases, may be used for immunosensory or DNA anal.

14 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

That, R1 = 7-hydroxy-1,1,4-tetrahydro-1-quinolylpyruvate was cyclodehydrated in FROM with N-methyl-7-hydroxy-5-nitroso-1,3,3,4-tetrahydroquinoline to give an R1 ester product which was hydrolyzed to a carboxylate zwitterionic form. This form was converted to the 3-hydroxyacetic acid ester and then to a digoxin conjugate.

IT 185213-59-1P 185213-61-5P 185213-70-1P
 R1: 2MP (Industrial manufacture); TDM (Technical or engineered material use); PRED (Preparation); USES (Uses)

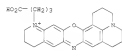
HN 185213-59-5 CAPLUS
 CN 16,16,126-Pyrrolo[2,3-b]quinoxaline[2,9-b]phenoxazinium,
 14-[3-carboxypropyl]-2,3,6,7,12,13-hexahydro-, tetrafluoroborate(1-)

(141) (CA INDEX NAME)

CN 1

CN 185213-57-6

CCL C28 R28 R3 03



CN 2

CN 14874-70-3

CML R F4

CCL C28



HN 185213-66-5 CAPLUS

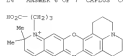
CN 16,16,126-Pyrrolo[2,3-b]quinoxaline[2,9-b]phenoxazinium,
 14-[3-carboxypropyl]-2,3,6,7-tetrahydro-11,13,13-trimethyl-,
 tetrafluoroborate(1-)

CN 3

CN 185213-65-1

CML C28 R28 R3 03

14 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



CN 2

CN 14874-70-5

CML R F4

CCL C28



HN 185213-70-1 CAPLUS

CN 28,16,126-Pyrrolo[2,3-b]quinoxaline[2,9-b]phenoxazinium,
 1-[3-carboxypropyl]-11-ethyl-8,9,10,11-tetrahydro-2,4-trimethyl-,
 tetrafluoroborate(1-)

CN 1

CN 185213-69-8

CML C27 R28 R3 03



CN 2

CN 14874-70-5

CML R F4

CCL C28

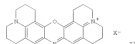
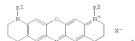
14 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



14 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1997:90362 CAPLUS
 DOCUMENT NUMBER: 118190362
 ORIGINAL REFERENCE NO.: 11815679a,15678a
 TITLE: Quinoxaline laser dyes
 INVENTOR(S): Harwood, Peter F.; Field, George F
 PATENT ASSIGNER(S): United States Dept. of Energy, USA
 SOURCE: U.S.; 6 pp.
 COUNTRY: USGAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5149497	A	19920922	US 1991-761559	19910918

PRECEDENT APPL. INFO.:
 OTHER SOURCE(S): MARPAT 118190362
 CI



AB Comps. described by the general formulas I and II are described (R1 and R2 are independently selected from C1-10 linear and branched alkyl and fluoroalkyl groups; and x= an anion). The compts. may be used as laser dyes emitting in the 700-800 nm region.

IT 145875-96-19
 RI: SYN (Synthetic preparation); PREP (Preparation)
 (preparation and use of, as laser dye)

RI 145875-96-3 CAPLUS

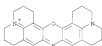
CI 18,56,116,118-01quinoline[3,9-bcd],9'-hydroxy,9'-hydroxy-6'-amino, 2,3,6,7,12,13,16,17-octahydro-, tetrafluoroborate[1-] (9CI) (CA INDEX 30M6)

CH 1

CHI 145875-95-2

CHI C24 R06 N0 0

14 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



CH 2

CHI 14574-70-5

CHI 2.74

CHI CCS



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RI FORMAT